

REMARKS

In the June 7, 2005 Office Action, the Examiner noted that claims 1-3, 13 and 15 were pending in the application; rejected claim 15 under the second paragraph of 35 USC § 112; rejected claim 2 under the first paragraph of 35 USC § 112; and rejected claims 1-3, 13 and 15 under 35 USC § 103(a). In rejecting the claims U.S. Patents 6,396,954 to Kondo; 6,054,959 to Young et al. (References A and D, respectively in the June 9, 2003 Office Action); and 5,870,701 to Wachtel (Reference A in the April 16, 2004 Office Action) were cited. Claims 1-3, 13 and 15 remain the case. The Examiner's rejections are traversed below.

Rejections under 35 USC § 112, Second Paragraph

In item 4 on pages 2-3 of the Office Action, claim 15 was rejected under the second paragraph of 35 USC § 112 for indefiniteness due to recitation of "processing non-language data", although the body of the claim recites "storing data groups, each identified by a natural language word ... and outputting the natural language word" (claim 15, lines 3-7). To avoid the interpretation of "processing" as including storing and outputting, the preamble of claim 15 has been amended to recite "associating words with non-language data" (claim 15, lines 1-2). Therefore, withdrawal of the rejection under the second paragraph of 35 USC § 112 is respectfully requested.

Rejections under 35 USC § 112, First Paragraph

In item 5 on page 3 of the Office Action, claim 2 was rejected under the first paragraph of 35 USC § 112 because the Examiner interpreted the words "noun" and "verb" as referring only to words in natural languages. Therefore, the words "natural language" have been deleted from claim 2. Withdrawal of the rejection is respectfully requested.

Rejections under 35 USC § 103

In item 6 on pages 4-6 of the Office Action, claims 1-3, 13 and 15 were rejected under 35 USC § 103(a) as unpatentable over Kondo in view of Young et al. and Wachtel.

It is submitted that one of ordinary skill in the art would find it clear from reading the specification that the present invention is not directed to voice recognition. It appears from the rejection as set forth on page 4 of the Office Action that the Examiner may be interpreting the storing and outputting operations recited in claim 1 as corresponding to the voice recognition operations performed by the components illustrated in Fig. 2 and described in columns 3-6 of Kondo. In an effort to avoid such an interpretation, claim 1 has been amended to clarify that the

data groups are "obtained by classifying numerical inputs from said sensors" (claim 1, line 5), as described on page 2 and elsewhere in the specification.

A detailed discussion of how what is recited in the storing operation of claim 1 differs from what is performed by the components illustrated in Fig. 2 of Kondo is provided below. If the Examiner is not persuaded by the following discussion that the storing and outputting operations recited in claim 1 do not encompass voice recognition, the Examiner is respectfully requested to contact the undersigned, so that an Examiner Interview can be held prior to the next Office Action, as requested below.

As discussed during the Examiner Interview on November 2, 2005, the applied art, Kondo, Young and Wachtel, do not disclose "associating words with non-language data obtained from at least one sensor" as recited in the preamble of claim 15. Instead, as indicated in the Office Action, Kondo discloses using "a microphone for entering voice data, a CCD (Charge Coupled Device) camera for picturing a user, an acceleration sensor for detecting vibration of the vehicle, sensors for measuring the moisture and the temperature, and other relevant sensors" (column 3, lines 47-51).

Specifically, Kondo discloses the use of two microphones to obtain voice input. "Microphone 11 may be of a directional type and pointed to the user who is the driver" (column 4, lines 23-24) and "microphone 13 may be of non-directional type for receiving sounds other than the voice of the user ... [such as] ambient sounds from an engine, from a radio receiver or a CD player mounted in the vehicle, and from an air conditioner, and when a window is opened, external noise" (column 4, lines 40-45). "The CCD camera 12 is located to picture the mouth of the user" (column 4, lines 35-36). The "output of the acceleration sensor [14] represents the level ... of noise caused by the vibration of the vehicle" (column 4, lines 54-56) while "the sensor [14] for measuring the moisture or the temperature determines whether it rains or not. If it is raining, the level of its sound is calculated" (column 4, lines 56-59). As described at column 4, line 63 to column 6, line 45, the output of these sensors "permits the voice of a user to be recognized not only from the voice data picked up by the microphone 11 ... but also from the image data pictures by the CCD camera 12, ... the audio data picked up by the microphone 13, and other data detected by the sensor 14" (column 6, lines 38-43) which "may be an acceleration sensor for detecting vibration of the vehicle or a sensor for measuring the moisture or the temperature" (column 4, lines 51-53) which, as discussed above, is used to determine background noise that needs to be filtered out of the voice signals. As a result, the classification

data construction unit 24 and classification unit 25 described in column 5 are used in voice recognition to determine the words spoken by the user.

No suggestion has been found in Kondo of using the data obtained from the sensors described in columns 3 and 4 for any other purpose than recognizing voice input. As illustrated in Fig. 2, all of these sensors, after processing by classification data construction unit 24, classification unit 25 and integrated parameter construction unit 26 described in column 5, are used to provide input to adaptivity determining unit 27, so that a "VOICE RECOGNITION RESULT" can be output. One of ordinary skill in the art would understand that voice recognition results are words. Thus, the output of the components illustrated in Fig. 2 and described in columns 3-6 of Kondo is "a natural language word" (claim 1, line 3). Claim 1 recites that words, like those output by the adaptivity determining unit taught by Kondo are stored in a database in the storing operation recited on lines 3-6 of claim 1 as "attached to each of said data groups" (claim 1, line 4) which are "obtained by classifying numerical inputs" (claim 1, line 5). Nothing has been cited or found in Kondo suggesting that any of the outputs of the sensors in input unit 10 of Kondo is used by some other portion of the apparatus illustrated in Fig. 1 of Kondo as recited in the storing operation of claim 1.

Claim 2 has also been amended to use terms found on page 2 and elsewhere in the specification to clarify that what is recited therein is not voice recognition. Instead of using the term "characteristic", claim 2 now recites "extracting a certain state or state change from sensor data input from said sensor" (claim 2, lines 3-4). Nothing has been cited or found in the description of the preprocessors 20-23 and various processing units 24-27 illustrated in Fig. 2 and described in columns 3-6 of Kondo suggesting that any state or state change is detected from any of the sensors 11-14 in the input unit 10. Therefore, it is submitted that claim 2 and claim 3 which depends therefrom patentably distinguish over the applied art for the reasons discussed above.

Claims 13 and 15 have been amended to recite "sensor input ... unrelated to language" (claim 13, line 4) and "non-language data received from the sensor" (claim 15, line 5). While the words "unrelated to language" and "non-language data" are not used in the specification, one of ordinary skill in the art would easily understand that what is described in the specification is sensor inputs that are not related to language in any way until the data output by the sensor are associated with words to provide a user interface that is easier to use.

As discussed above with respect to claim 1, there is no suggestion in Kondo of operations on sensors unrelated to language that include "classifying the sensor input using a

database including data groups in which a natural language word representing a characteristic of a corresponding data group is attached to each of the data groups" (claim 13, lines 4-7), or "comparing non-language data received from the sensor with the data groups to identify a similar data group corresponding to the non-language data received from the sensor" (claim 15, lines 5-6). Further, nothing has been cited or found in either Young or Wachtel that teaches or suggests modification of Kondo to process non-language data or inputs unrelated to language in the manner recited in the independent claims. For the above reasons, it is submitted that claims 1-3, 13 and 15 patentably distinguish over the prior art.

Request for Examiner Interview

If the rejection relying on Kondo, Young and Wachtel is not withdrawn based on the amendments and arguments herein, the Examiner is respectfully requested to contact the undersigned prior to issuing another Office Action, for the purpose of arranging an Examiner Interview to discuss what amendments can be made to the claims to clarify that the invention is not directed to a voice recognition system like that disclosed by Kondo.

Summary

It is submitted that the references cited by the Examiner, taken individually or in combination, do not teach or suggest the features of the present claimed invention. Thus, it is submitted that claims 1-3, 13 and 15 are in a condition suitable for allowance. Entry of the Amendment, reconsideration of the claims and an early Notice of Allowance are earnestly solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

Serial No. 09/185,550

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

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on 11/7/05, 2005
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